

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

## PCT

### INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

To:  
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## EINSCHREIBEN

Date of mailing  
(day/month/year) 16/10/2002

Applicant's or agent's file reference

CFU00012W0

**PAYMENT DUE**

within 45 ~~xxxx~~ days  
from the above date of mailing

International application No.

PCT/JP 02/05952

International filing date  
(day/month/year)

13/06/2002

Applicant

CANON KABUSHIKI KAISHA

1. This International Searching Authority

(i) considers that there are 0003 (number of) inventions claimed in the international application covered by the claims indicated ~~xxxx~~ on the extra sheet

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~xxxx~~ on the extra sheet:

(ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:  
**1-4, 7-17, 24-43**

(iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby **invited**, within the time limit indicated above, to pay the amount indicated below:

EUR 945,00 x 0002 = EUR 1.890,00  
Fee per additional invention      number of additional inventions      total amount of additional fees

Or, \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☒ Claim(s) Nos. 5, 6, 18-23 have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



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Authorized officer

Roger Thomas

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-4,7-17,24-43

Claims 1-4, 7-17 and 24-43 relate to an isometric crystal for which the angle between the [001] crystallographic axis and the optical axis of an optical system comprising said isometric crystal is given.

The underlying problem to be solved is how to orientate an isometric crystal within an optical system.

The special characteristic is the angle between a crystallographic axis ([001]) of the isometric crystal and the optical axis of the optical system comprising that isometric crystal.

2. Claims: 5-6

Claims 5 and 6 relate to a method for growing an isometric crystal and getting a physical face of said isometric crystal parallel to a given crystallographic plane.

The underlying problem to be solved is how to obtain an isometric crystal having a face parallel to a crystalline plane.

The special characteristic is the parallelism between a physical face of the isometric crystal and a given crystallographic plane thereof.

3. Claims: 18-23

Claims 18-23 relate to an optical system comprising at least one element having intrinsic birefringence so that the wavefront deviation caused by the birefringence in the whole system is lower than  $\lambda/4$  ( $\lambda$  being the used wavelength).

The underlying problem to be solved is how to select the intrinsic birefringence of an optical element within an optical system to improve the image quality of said optical system.

The special feature is the intrinsic birefringence of at least one element within the optical system.

Hence the application appears to lack unity within the meaning of Rules 13.1 and 13.2 PCT since the three above separate groups are not so linked as to form a single general inventive concept (Rule 13.1 PCT).

The application relates to a plurality of inventions, or groups of inventions, in the sense of Rule 13.1 PCT. They have been divided as defined above. If the applicant pays additional fees for one (or more) not yet searched group(s) of invention(s), then the further search(es) may reveal further prior art that gives evidence of a further lack of unity 'a posteriori' within one (or more) of the not yet searched group(s). In such a case only the first invention in this (each of these) group(s) of inventions, which is considered to lack unity of invention, will be the subject of a search.

No further invitation to pay further additional fees will be issued. This is because Article 17(3)(a) PCT stipulates that the ISA shall establish the International Search Report on those parts of the international application which relate to the invention first mentioned in the claims ('main invention') and for those parts which relate to inventions in respect of which the additional fees were paid. Neither the PCT nor the PCT guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 206

Continuation of Box 3.

Claims Nos.: 5,6,18-23

The large number and phrasing of independent claims presently on file render difficult, if not impossible, to determine the matter for which protection is sought, the present application fails to comply with the clarity and conciseness requirements of Article 6 PCT (see also Rule 6.1(a) PCT) to such an extent that a meaningful search is impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear.

Present claims 1-4, 7-17 and 24-43 (first group) relate to an extremely large number of possible devices. For example in claim 3, which appears to be the broadest of this group:

- The structural relationship/arrangement between the "optical element", "isometric crystal" and "optical system" is not defined;
- It is also not clear how the optical axis is defined/measured;
- Furthermore, the identification of structural features appears impossible from the phrasing of the claim; The present phrasing of the claim does not enable the skilled person to determine the essential structural features that are necessary to carry out the invention.

Therefore, a meaningful search is impossible.

Furthermore in the other two groups of inventions:

- In claim 5, it is unclear how the optical element is formed. In addition, the phrasing "controlling growth so that" attempts to define the subject-matter of the claim in terms of a result to be achieved thereby fails to identify the actual method steps leading to that result. Also, <001> is actually a crystallographic axis, not a face/plane (see e.g. claim 3).
- In claim 18, it is unclear with respect to what the wavefront deviation is estimated. It is further impossible to figure out whether it is a limitation on the PTV or the RMS figure and how/where is said wavefront deviation measured.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
- 1-4, 7-17, 24-43**
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 867 315 A (KOIKE KATSUHIRO ET AL) 2 February 1999 (1999-02-02)  abstract; claims 1,5,10-12,21,24,27 ---	1-4, 8-17, 24-43
A	US 4 215 288 A (KATO TAKEFUMI ET AL) 29 July 1980 (1980-07-29)  the whole document ---	1-4, 8-17, 24-43
A	PATENT ABSTRACTS OF JAPAN vol. 017, no. 305 (P-1554), 11 June 1993 (1993-06-11) & JP 05 027200 A (FUJITSU LTD), 5 February 1993 (1993-02-05) abstract ---	1-4, 8-17, 24-43
A	US 2 934 993 A (CHROMY BENJAMIN J) 3 May 1960 (1960-05-03)  the whole document -----	1-4, 8-17, 24-43

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

# Patent Family Annex

Information on patent family members

International Application No

PCT/JP 02/05952

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5867315	A	02-02-1999	JP 9043401 A	14-02-1997
US 4215288	A	29-07-1980	NONE	
JP 05027200	A	05-02-1993	NONE	
US 2934993	A	03-05-1960	NONE	